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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/215,194	12/18/1998	HIDEYUKI Ikegami	862.2632	7690

5514 7590 04/08/2002

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EXAMINER

NGUYEN, TANH Q

ART UNIT PAPER NUMBER

2182

DATE MAILED: 04/08/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

10/1

# Office Action Summary

Application No.

09/215,194

Applicant(s)

IKEGAMI ET AL.

Examiner

Tanh Q. Nguyen

Art Unit

2182

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 19 February 2002 and 18 March 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 15, 16, 18-23 and 25-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 15, 16, 18-23 and 25-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 15-16, 18-21; 22-23, 25-28; 29-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Nagata et al. (U. S. Pat. No. 5,787,288)** in view of **Shaw (U. S. Pat. No. 6,341,373)**; and alternatively under 35 U.S.C. 103(a) as being unpatentable over **Shaw** in view of **Nagata et al.**.

3. As per claim 15, **Nagata et al.** (Nagata) teaches an image forming apparatus [10, FIG. 8] comprising:

a first memory medium [3, FIG. 8] for storing control codes (col. 4, lines 56-58);

a display means [6, FIG. 8] for displaying messages associated with image forming operations (col. 4, lines 66-67);

a receive means [2, FIG. 8] for receiving data (col. 4, lines 54-56) from an external apparatus [9, FIG. 8];

a second memory medium [4, FIG. 8] for storing the data received by the receive means (col. 4, lines 58-62)

a rewrite means (col. 5, lines 8-11) for rewriting control codes stored in the first memory medium;

wherein, when a determination is made that a renewal of control codes is requested (col. 6, lines 17-24; col. 6, lines 51-54; col. 8, lines 57-59), the receive means receives both rewrite execution codes and control codes from the external apparatus (col. 2, line 63-col. 3, line 3; col. 8, lines 41-48), with both the rewrite execution codes and the control codes being stored in the second memory medium (col. 9, lines 13-16), and the rewrite means rewrites the control codes in the first memory medium with the control codes in the second memory medium in accordance with the rewrite execution codes (col. 6, lines 40-41; col. 7, lines 44-46).

Nagata does not specifically teach the display means displaying a message informing the fact that the image forming apparatus is under download of data into the second memory medium.

Nagata, however, teaches an electromagnetic lock mechanism [52, FIG. 8] locking a power switch [51, FIG. 8] to maintain the image forming apparatus in a power on state (col. 5, lines 12-25) while control codes are being renewed (col. 8, line 55-col. 9, line 9), and as early as when a request is issued for renewal of control codes (col. 9, lines 9-12) to allow the renewal process to be completed safely (col. 3, lines 52-56). It would have been obvious to one of ordinary skill in the art at the time the invention was made that Nagata teaches prevention of accidental powering off of the image forming apparatus during the renewal of control codes; and since the download of data occurs

after a request is issued for renewal codes, also teaches download of data into the second memory medium being part of the renewal of control codes process.

Nagata further teaches other means for ensuring that the image forming apparatus remains powered on during renewal of control codes, including the display means being used instead of the lock mechanism to alert the fact that the control codes are being renewed (col. 5, lines 25-33). It would have been obvious to one of ordinary skill in the art at the time the invention was made that the use of the display means to alert the fact that the control codes are being renewed would help prevent a user from accidentally powering off the image forming apparatus during the renewal process by making the current use of the information apparatus visible and recognizable to the user. Nagata, therefore, teaches the display means displaying a message informing the fact that the image forming apparatus is under download of data into the second memory medium.

Nagata, therefore, teaches the claimed invention except for teach a third memory medium for storing transfer control codes which are adapted to control transfer of rewrite execution codes from the external apparatus, with the receive means receiving the rewrite execution codes from the external apparatus in accordance with the transfer control codes stored in the third memory medium.

**Shaw** teaches a client device [10, FIG. 1] comprising:

a first memory medium [16, FIG. 1] for storing control codes [26, FIG. 1];

a receive means [40, FIG. 1] for receiving data (col. 2, lines 63-65; col. 4, line 21-  
col. 5, line 15) from an external apparatus [60, FIG. 1];

a second memory medium (RAM: col. 2, lines 49-51) for storing the data received by the receive means (col. 2, line 67-col. 3, line 4);

a third memory medium [14, FIG. 1] for storing transfer control codes [24, FIG. 1] which are adapted to control transfer of rewrite execution codes from the external apparatus (col. 4, lines 12-20), with the receive means receiving the rewrite execution codes from the external apparatus in accordance with the transfer control codes stored in the third memory medium (col. 4, lines 21-41; col. 2, line 62-col. 3, line 6);

a rewrite means (col. 4, line 46-col. 5, line 15) for rewriting control codes stored in the first memory medium; and

wherein, when a determination is made that a renewal of control codes is requested (col. 2, lines 59-61), the receive means receives the rewrite execution codes from the external apparatus in accordance with the transfer control codes stored in the third memory medium and the receive means also receives the control codes from the external apparatus (col. 4, line 9-col. 5, line 15), with both the rewrite execution codes and the control codes being stored in the second memory medium (col. 2, line 67-col. 3, line 7), and the rewrite means rewrites the control codes in the first memory medium with the control codes in the second memory medium in accordance with the rewrite execution codes (col. 4, line 9-col. 5, line 15).

Shaw's teachings allow for a more secure download, recovery and upgrade of control codes in a first memory medium (Abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate Shaw's transfer control codes stored in the third

memory medium, and adapted to control transfer of rewrite execution codes into Nagata's image forming apparatus because both Shaw's and Nagata's teachings are directed to renewing control codes in a first memory medium with control codes received from an external apparatus using rewrite execution codes also received from the external apparatus, and because Shaw's aforementioned teachings would allow for a more secure download, recovery and upgrade of the control codes in a first memory medium.

4. As per claim 15, the following alternate rejection also applies. With reference to paragraph 3 above, Shaw does not specifically teach an image forming apparatus having a display means for displaying messages associated with an image forming apparatus, with the display means displaying a message informing the fact that the image forming apparatus is under download of data into the second memory medium.

Shaw teaches a client device, hence encompasses an image forming apparatus having a display means for displaying messages associated with an image forming apparatus. Shaw further teaches a boot code [32, FIG. 1] that is responsible for the selection and execution of either the transfer control codes in the third memory medium, or the control codes in the first memory medium (col. 2, lines 59-61). It is noted that Shaw's teachings would be well suited for a client device requiring downloaded control codes from a server, whether the client device is an image forming apparatus, a computer or any device that can communicate with the server using its own processor. Shaw, therefore, teaches the claimed invention except for displaying a message informing the fact that the image forming apparatus is under download of data into the second memory medium.

Nagata teaches, in paragraph 3 above, the display means displaying a message informing the fact that the image forming apparatus is under download of data into the second memory medium to allow the renewal process to complete safely and to prevent a user from accidentally powering off the image forming apparatus during the renewal process by making the current use of the information apparatus visible and recognizable to the user.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate Nagata's display means displaying a message informing the fact that the image forming apparatus is under download of data into the second memory medium into Shaw's client device because both Shaw's and Nagata's teachings are directed to renewing control codes in a first memory medium with control codes received from an external apparatus using rewrite execution codes also received from the external apparatus, and because Nagata's aforementioned teachings would allow the renewal process to complete safely and would prevent a user from accidentally powering off the image forming apparatus during the renewal process by making the current use of the information apparatus visible and recognizable to the user.

5. As per claims 16, 18-21,

Nagata teaches the rewrite execution codes being transferred to a non-volatile memory medium [3, FIG. 8] as the first memory medium and stored therein (col. 9, lines 14-16); an image forming control means for controlling an image forming process, and a



switching means for exclusively changing over between the image forming process and the rewriting of the control codes (col. 5, lines 5-11; col. 6, lines 17-24); and the switching means exclusively changing over in accordance with a predetermined command [NSS signal] transmitted from the external apparatus (col. 6, lines 51-54).

Shaw teaches the rewrite execution codes being transferred to a non-volatile memory medium [16, FIG. 1] as the first memory medium and stored therein (col. 5, lines 13-15); the rewrite execution codes including address information of the first memory medium for rewriting the control codes in accordance with the address information (col. 4, line 41-col. 5, line 15; col. 5, lines 32-35); a switching means [20, FIG. 1] for exclusively changing over between an operational process and the rewriting of the control codes (col. 2, lines 59-61; col. 3, lines 23-30); the switching means exclusively changing over in accordance with a predetermined switch [20, FIG. 1; col. 3, lines 23-30]; and the switching means exclusively changing over in accordance with a predetermined command transmitted from the external apparatus (col. 3, line 42-col. 4, line 7).

6. As per claims 22-23, 25-28 and 35, Nagata in combination with Shaw teaches an image forming apparatus and rewriting of control codes in such an apparatus (see rejections to claims 15-16 and 18-21 in paragraphs 3-5 above), therefore teaches the rewrite control method for such an apparatus.

7. As per claims 29-34, Shaw further teaches a processor [12, FIG. 1] within client device [10, FIG. 1] for controlling the image forming apparatus in accordance with the control codes stored in the code memory (col. 4, lines 1-4), wherein the client device (hence the processor of the client device) controls the transfer of the rewrite execution codes from the external apparatus in accordance with the transfer control codes stored in the memory (col. 4, lines 8-44), the transfer of control codes from the external apparatus (col. 4, lines 45-col. 5, line15), and the rewriting of the control codes (col. 4, lines 45-col. 5, line15).

Shaw also teaches the code memory being a rewritable memory [16, FIG. 1; col. 2, lines 43-51]; the memory being a ROM [14, FIG. 1; col. 2, lines 43-51]; and the control codes and the rewrite execution codes being programs executed by the client device (hence executed by the processor of the client device).

8. Claims 15-16, 18-21; 22-23, 25-28; 29-35 are alternatively rejected under 35 U.S.C. 103(a) as being unpatentable over **Nagata et al.** in view of **Shaw** and further in view of **Knodt et al. (U.S. Pat. No. 5,987,535)**; and alternatively rejected under 35 U.S.C. 103(a) as being unpatentable over **Shaw** in view of **Nagata et al.** and further in view of **Knodt et al.**.

The 103(a) rejections to claims 15-16, 18-21; 22-23, 25-28; and 29-35 over Nagata in view of Shaw (or alternatively over Shaw in view of Nagata) in paragraphs 3-8 above are incorporated by reference. Knodt et al. (Knodt) further teaches the

desirability to present to an operator an immediate and easily recognizable indication of the status and capability of a given machine on a display means, the status including the current use of the machine (col. 2, lines 3-9; col. 2, lines 26-35). It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide an easily recognizable indication of the current use of a given machine on a display means in Knodt's teachings to the combination of Shaw's and Nagata's image forming apparatus and display means because such a combination would represent a desirable feature for the combination of Shaw's and Nagata's apparatus and would also make the combination of Shaw's and Nagata's apparatus more user friendly.

9. Claims 18-20; 25-27 and 32-33 are alternatively rejected under 35 U.S.C. 103(a) as being unpatentable

over **Nagata et al.** in view of **Shaw** and further in view of **Whitley et al.** (U.S. Pat. No. 5,590,373);

over **Shaw** in view of **Nagata et al.** and further in view of **Whitley et al.**;  
over **Nagata et al.** in view of **Shaw**, further in view of **Knodt et al.**, and further in view of **Whitley et al.**; or

over **Shaw** in view of **Nagata et al.**, further in view of **Knodt et al.**, and further in view of **Whitley et al.**.

**Whitley et al.** (Whitley) teaches rewriting the control codes to a memory medium using rewrite execution codes, the rewrite execution codes including address information of the first memory medium for rewriting the control codes in accordance

with the address information (col. 7, lines 43-53); a switching means [FIG. 2G; FIG.3] for exclusively changing over between an operational process [FIG. 2H] and the rewriting of the control codes (col. 3, lines 7-15; col. 5, lines 20-34); and the switching means exclusively changing over in accordance with a predetermined switch [126(6), FIG. 3] with the rewrite execution codes and the control codes being downloaded from a memory card.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate Whitley's aforementioned teachings into the combinations above because the combinations above and Whitley are all directed to renewing control codes in a first memory medium with control codes received from an external apparatus using rewrite execution codes also received from the external apparatus, and because Whitley's aforementioned teachings would allow the control codes in the first memory medium to be rewritten with control codes from a memory card.

### ***Response to Arguments***

10. Applicant's arguments with respect to claims 15-16, 18-21; 22-23, 25-35 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

**Lee et al. (U.S. Pat. No. 5,870,520)** teaches a flash disaster recovery utility for rewriting a control program in a flash ROM, the flash disaster recovery utility includes a boot segment, a loader, and a flash utility segment [FIGs. 5; 6A, 6B; col. 8, line 57-col. 12, line 30] that are functionally similar to the Navio boot code, the downloader code, and the updater code in Shaw's teachings [FIG. 1] with the external apparatus being a floppy disk (instead of the external apparatus being a remote server, as is taught in Shaw's teachings).

**Dewa et al. (U.S. Pat. No. 5,522,076)** teaches a boot program, a load program, and a rewriting program (col. 2, line 53-col. 3, line 13; also col. 3, line 14-col. 4, line 19) that are similar to Lee's teachings.

**Ueda (U.S. Pat. No. 5,742,742)** teaches a printer rewriting a control program in ROM using a ROM card (col. 1, lines 41-55), with the ROM card providing functions similar to the functions of the floppy disk in Lee's teachings, or similar to functions of the rewriting unit connected to an expansion bus connector in Dewa's teachings.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine either Lee's or Dewa's teachings with Ueda's teachings because they are all directed to renewing control codes in a first memory medium with control codes received from an external apparatus using rewrite execution codes also received from the external apparatus, and because the combination would allow a printer to recover from a disaster such as when a BIOS ROM becomes corrupted, and also would allow the printer to upgrade a BIOS ROM.

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12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tanh Quang Nguyen whose telephone number is (703) 305-0138, and whose e-mail address is [tanh.nguyen36@uspto.gov](mailto:tanh.nguyen36@uspto.gov). The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Gaffin, can be reached on (703) 308-3301. The fax phone number for the organization where this application or proceeding is assigned is (703) 746-7238 for After Final, (703) 746-7239 for Official, (703) 746-7240 for Customer Services, or (703) 746-5672 for Draft to the Examiner (please label "PROPOSED" or "DRAFT").

Any inquiry of a general nature relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Mail responses to this action should be sent to:

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Faxes for formal communications intended for entry should be sent to:

(703) 308-9051,

Hand-delivered responses should be brought to:

Crystal Park II, 2121 Crystal Drive, Arlington, Va, Sixth Floor (Receptionist).

TQN

April 3, 2002



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